KHLEBNIKOV, N.S.; MELAMID, A.E.

Problem concerning the effect of the polarization of light on the photoeffect of complex cathodes. Radiotekh.i elektron. 6 no.7:1215-1216 Jl '61. (MIRA 14:6)
(Photoelectricity) (Polarization (Light)) (Cathodes)

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AUTHORS: Khlebnikov, N.S., Melamid, A.Ye., and Kovaleva, T.A.

TITLE: Amplitude distribution of output pulses of a photomultiplier

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 3, 1962, 518 - 524

TEXT: It had been shown theoretically by Janossy (Ref. 1: ZhETF, 1955, 28, 6, 599) that the output pulses of a photomultiplier have a Poisson distribution. On the other hand some experiments seemed to prove the contrary. The authors performed carefully prepared experiments to prove the correctness of the former. The precondition is that only multiplication of single electrons should be measured, in an ideal vacuum, free of gas phenomena. This was achieved by specially choosing photomultipliers (about 20) with low background and a plateau in their characteristics (counts versus overall voltage). The photomultipliers were operated in this middle region, where all single electrons get multiplied by the tube and gas phe-

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nomena have very little effect. The latter was measured by two additional photomultipliers in a triple coincidence experiment and found to be ~1%; it was subtracted from the main measurements. To make sure that only single electrons were multiplied, only thermal electrons were used. Under these conditions the amplitude distribution turned out to be Poissonian, even for different secondary emission coefficients. The authors also confirmed that the pulses of dark current are due to single electrons. Although for cascade image tubes it was reported to be due to multiple electrons, these are, according to the authors, the results of more complicated mechanism. There are 9 figures and 6 references: 3 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: J.A. Baicker, IRE Trans. Nucl. Sci., 1960, NS-7, 2-3, 74; F.J. Lombard, F. Martin, Rev. Sci. Instrum., 1961, 32, 2, 200.

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ACCESSION NR: AP4040912 S/0109/64/009/006/1020/1028

AUTHOR: Khlebnikov, N. S.; Melamid, A. Ye.; Kovaleva, T. A.

TITLE: Effect of the gas discharge and optical feedback on the production of afterpulses at the output of a multiplier phototube

SOURCE: Radiotekhnika i elektronika, v. 9, no. 6, 1964, 1020-1028

TOPIC TAGS: phototube, multiplier phototube, phototube afterpulse, FEU-1S phototube

ABSTRACT: Afterpulses, which occur at the output of a phototube operating at a sufficiently high supply voltage, cause an increase in the total number of pulses and distort their amplitude distribution. The afterpulses are generated by the glow of the gas discharge in the last-dynode-collector gap, which causes an optical feedback from the phototube output to its photocathode. The afterpulses were experimentally studied on a hookup consisting of an FEU-1S-equivalent

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ACCESSION NR: AP4040912

photobube, a broadband amplifier, an electronic oscillograph, and a movie camera; 720 and 380 measurements were made at 1.6 and 2.1 kv, respectively. It was found that the distribution of the probability of afterpulses can be described by this formula: $P(i) = A^i (1-A)$, where A^i is the average number of electrons emitted by the photocathode in the i-th avalanche. Afterpulses may be eliminated from the record by increasing the resolving time of the scaler. Orig. art. has: 9 figures and 7 formulas.

ASSOCIATION: none

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MELAMID, A.Ye.; KHLEBNIKOV, N.S. [deceased]

Interference method for studying complex photocathodes.
Radiotekh. i elektron. 9 no.6:1001-1008 Je '64.

Optical constants and [illegible] characteristics of complex photocathodes. Ibid.:1009-1019 (MIRA 17:7)

GEL'FMAN, Georgiy Nikonovich; DANYUSHEVSKIY, Viktor Solomonovich; KHLEBNIKOV, N.V., st. inzh., red.; BUSHMAKIN, A.P., st. inzh., red.; OSTASHEVSKAYA, G.A., red.

[Corrosion of cement stone in oil wells] Korroziia tsementnogo kamnia v neftianykh skvazhinakh. Ufa, Izd-vo "Bashkortostan," 1964. 59 p. (MIRA 18:10)

1. Otdel bureniya Ob"yedineniya Bashkirskoy neftyanoy promyshlennosti (for Khlebnikov). 2. Tekhnicheskiy otdel Ob"yedineniya Bashkirskoy neftyanoy promyshlennosti (for Bushmakin).

CERKOVICH, Mikhail Yakovlevich; SINOPLIS, Leonid Aleksandrovich; KHLEBNIKOV, Nikolay Vasil'yevich; ROSHCHIN, P.F., red.; ISAYEVA, V.I., ved. red.

[Preventing and eliminating accidents in structural drilling] Preduprezhdenie i likvidatsiia avarii v strukturno-poiskovom burenii. Moskva, Izd-vo "Nedra," 1964. 178 p. (MIRA 17:7)

DOMANSKIY, L.K.; KHLEBNIKOV, N.V.

Dam design and structural features of the dam of the Krasnoyarsk Hydroelectric Power Station. Trudy Lengidroproekta no.1:5-20 '64. (MIRA 18:10)